

CENTRAL PNEUMATIC®

1/4" STUBBY AIR RATCHET

Model 91002

OPERATING INSTRUCTIONS



3491 Mission Oaks Blvd., Camarillo, CA 93011
Visit our Web site at <http://www.harborfreight.com>

Copyright© 2003 by Harbor Freight Tools®. All rights reserved. No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools.
For technical questions and replacement parts, please call 1-800-444-3353

Specifications

Maximum Torque	20 Ft. Lbs.
Air Consumption	3.5 CFM
Drive Size	1/4" Square
Air Inlet	1/4" - 18 NPT
Maximum Air Pressure	90 PSI
Rotation Speed	280 RPM
Weight	1.2 Lbs.

Save This Manual

You will need the manual for the safety warnings and precautions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this tool!

1. **Keep work area clean.** Cluttered areas invite injuries.
2. **Observe work area conditions.** Do not use machines or power tools in damp or wet locations. Don't expose to rain. Keep work area well lit. Do not use electrically powered tools in the presence of flammable gases or liquids.
3. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, extension cords, or air hoses.
4. **Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
5. **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this tool was designed. It will do the job better and more safely at the rate for which it was intended. Do not modify this tool and do not use this tool for a purpose for which it was not intended.
6. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.
7. **Use eye and ear protection.** Always wear ANSI approved impact safety goggles. Wear a full face shield if you are producing metal filings or wood chips. Wear an ANSI approved dust mask or respirator when working around metal, wood, and chemical dusts and mists.

8. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines or air hoses.
9. **Maintain tools with care.** Keep tools clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords and air hoses periodically and, if damaged, have them repaired by an authorized technician. The handles must be kept clean, dry, and free from oil and grease at all times.
10. **Disconnect air supply.** Disconnect air hose when changing accessories or not in use.
11. **Remove adjusting keys and wrenches.** Check that keys and adjusting wrenches are removed from the tool or machine work surface before plugging it in.
12. **Avoid unintentional starting.** Be sure the trigger is in the Off position when not in use and before plugging in. Do not carry any tool with your finger on the trigger, whether it is plugged in or not.
13. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
14. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if the trigger does not turn On and Off properly.
15. **Guard against electric shock.** Prevent body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerator enclosures.
16. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
17. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels if taking prescription medicine to determine if your judgement or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.
18. **Use proper size and type extension cord.** If an extension cord is required, it must be of the proper size and type to supply the correct current to the air compressor without heating up. Otherwise, the extension cord could melt and catch fire, or cause electrical damage to the air compressor. Check your air compressor's manual for the appropriate size cord.
19. **Maintenance.** For your safety, maintenance should be performed regularly by a qualified technician.
20. **Compressed air only.** Never use combustible gas as a power source.
21. **Do not use a "cheater" or any other extension to increase torque on this tool.** Do not exceed the maximum torque rating for this tool.

NOTE: Performance of the compressor (if powered by line voltage) may vary depending on variations in local line voltage. Extension cord usage may also affect tool performance.

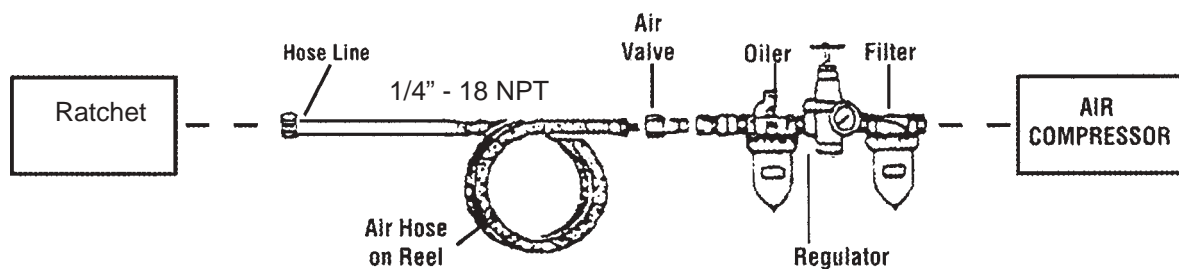
WARNING: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

WARNING: The brass components of this product contain lead, a chemical known to the State of California to cause birth defects (or other reproductive harm). (California Health & Safety code 25249.5, et seq.)

Unpacking

When unpacking, check to make sure the parts listed on page 6 are included. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual as soon as possible.

Operation



Recommended Air Line Components

For best service you should incorporate an oiler, regulator, and inline filter, as shown in the diagram above. Hoses, couplers, oilers, regulators, and filters are all available at Harbor Freight Tools.

1. You will need to prepare a 1/4" air connector (sold separately) to connect to the air inlet on the Ratchet. First, wrap the 1/4" air connector (not included) with pipe thread seal tape before threading it into the Air Inlet (11). Connect the 3/8" ID Air Source Hose to the Ratchet.

Note: If you are not using an automatic oiler system, before operation, add a few drops of Pneumatic Tool Oil to the airline connection. Add a few drops more after each hour of continual use.

2. Set the air pressure on your compressor to 90 PSI. Do not exceed the maximum air pressure of 90 PSI.
3. Check the air connection for leaks. Disconnect the Ratchet from the air source.

Operation (continued)



Warning! Disconnect the Ratchet from the air source when attaching and removing sockets (not included). There is no safety lock mechanism on this tool; always disconnect from the air source when not in use.

Refer to the photograph above.

1. Attach a socket (not included) to the 1/4" Anvil.
2. By following the directions on page 4, attach the Ratchet to the air source hose.
3. Gently squeeze the Trigger (12) to activate the Ratchet. Do not force the unit; allow it to do the work for you. To change direction (loosen vs. tighten), stop the tool, move it away from the workpiece, then turn the Reverse Button (36).
4. To adjust the torque, readjust the air pressure. Do not exceed the maximum air pressure of 90 PSI.
5. When you are finished working, turn off the compressor and disconnect the air source hose.

Warning! There may still be air in the Ratchet. Squeeze the Trigger (12) and activate the Ratchet to expel any air still inside the tool.

6. Remove the socket (not included).

Maintenance

Warning! Always disconnect the Ratchet from the air source hose before attempting any maintenance.

1. Wipe the unit down with a lint free cloth.
2. Periodically apply a high grade, light machine oil to the Trigger Pivot area (see above).
3. Make sure the 1/4" Anvil (39), the Air Inlet (11), and the Reverse Button (36) are clear of grease, dirt, and debris.

Parts List

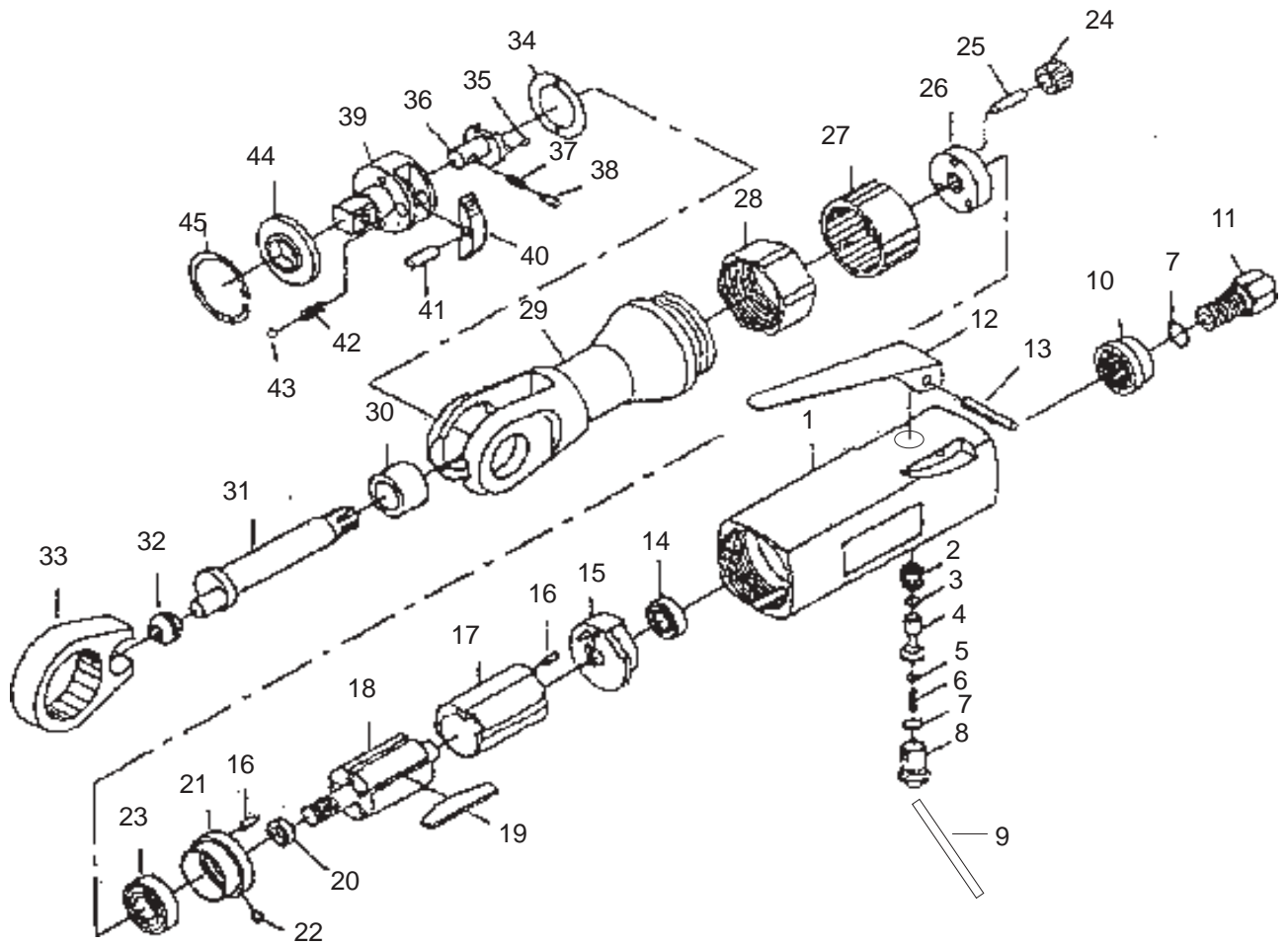
Part No.	Description	Part No.	Description
1	Motor Housing	24	Planet Gear
2	Valve Bushing	25	Planet Pin
3	O-ring	26	Gear Cage
4	Throttle Valve	27	External Gear
5	O-ring	28	Clamp Nut
6	Spring	29	Ratchet Housing
7	O-ring	30	Needle Bearing
8	Valve Screw	31	Crankshaft
9	Pin	32	Drive Bushing
10	Exhaust Sleeve	33	Ratchet Yoke
11	Air Inlet	34	Washer
12	Trigger	35	Pin
13	Pin	36	Reverse Button
14	Bearing	37	Reverse Spring
15	Rear End Plate	38	Reverse Pin
16	Pin	39	1/4" Anvil
17	Cylinder	40	Ratchet Pawl
18	Rotor	41	Pin
19	Rotor Blade	42	Spring
20	Rotor Collar	43	Steel Ball
21	Front End Plate	44	Thrust Washer
22	Roll Pin	45	Retaining Ring
23	Bearing		

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

NOTE: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

Assembly Drawing



90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

3491 Mission Oaks Blvd. • PO Box 6009 • Camarillo, CA 93011 • (800) 444-3353